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# SCI-TECH NEWS

OFFICIAL BULLETIN  
OF THE  
SCIENCE-TECHNOLOGY

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DIVISION  
SPECIAL  
LIBRARIES  
ASSOCIATION

Pricing of ACS Publications

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Volume 13 — No. 4

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Chemistry • Engineering • Paper & Textiles • Petroleum • Pharmaceutical • Public Utilities

# EDITORIAL

## WHAT'S THE ANSWER?

"Extended library services make it largely unnecessary for many scientists to subscribe personally (to journals). (1) In this statement Richard H. Belknap, Business Manager, American Chemical Society charges the special library with a portion of the responsibility for the financial plight in which some of the scientific publishers find themselves.

The American Chemical Society has cause for concern. In the 25 years between 1933 and 1958 the JOURNAL OF THE AMERICAN CHEMICAL SOCIETY subscriptions dropped from 17,500 to 15,600, in spite of the appreciable increase in the number of chemists. Even worse, the subscription list for CHEMICAL ABSTRACTS dropped from 22,675 in 1949 to 17,301 in 1958. And the librarian with a penchant for giving service to his clientele is blamed as the cause.

With rising costs for labor, paper, production and distribution, and dwindling circulation and hence revenue, the American Chemical Society sees only one possibility—raise the subscription cost of the journal in the attempt to minimize the subsidy the Society must provide to underwrite publications. For CHEMICAL ABSTRACTS the cost to an industrial library will be raised from \$350.00 to \$570.00 per year. Ten years ago it was \$15.00.

We acknowledge the importance of the abstract service of the American Chemical Society to the research community. In all fairness we willingly admit the value, if it can be reckoned, of CHEMICAL ABSTRACTS is much greater to many organizations than the 1960 subscription charge. But one can't place a value on the air we breathe or the water available to us from our kitchen faucet. We must continue to have the service provided by ACS, just as individuals we must continue to use air and water.

The difficulties experienced by ACS should not be assessed against the library profession. The growth in libraries is a result of the social phenomenon which is troubling ACS, not the cause of it. People have not discontinued building large personal libraries because they can obtain their professional books from a company library. Rather, the reverse is true; industrial or special libraries have been formed because the individuals can no longer meet their information require-

(1) Talk before the ACRL's Advisory Committee on Cooperation with Educational and Professional Organizations printed in COLLEGE AND RESEARCH LIBRARIES, Sept. 1959, p. 353.

ments from their own personal literature resources. The demands made on the individual by mid-twentieth century society, ranging from the income tax to a triennial replacement of his automobile, rob him of the percentage of his income that his grandfather spent on literature. Not only has the cost of the individual book or journal subscription increased, but where five journals might have sufficed fifty years ago, 75 are needed now to provide the same coverage. Our sympathies are with ACS but we believe their solution is in error, just as we believe their culpability assessment is wrong.

ACS can price itself out of existence. The library which got two sets of CHEMICAL ABSTRACTS last year will renew one subscription in 1960, not two. The engineering library which serves no chemists but subscribed to CHEMICAL ABSTRACTS to supplement PHYSICS ABSTRACTS, the ENGINEERING INDEX and the H. W. Wilson services will drop its subscription entirely and buy volumes after publication from a dealer in back issues. The supervisor of a small library with a budget of less than \$5,000.00 a year, and there are many which operate on less, will cancel its subscription. In 1960 the plight of ACS publications will be more severe than it was in 1958.

We won't mention, at least at length, the unfairness of charging a university library with a book budget of \$50,000.00, \$150.00 for CHEMICAL ABSTRACTS and an industrial library with a book budget of \$5,000.00,

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### SCI-TECH NEWS

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## ACS REPLIES

### RICHARD H. BELKNAP

Business Manager, American Chemical Society

Mr. Randall is right. There are causes for the financial dilemma of the journals of the American Chemical Society other than the efficiency of library service. We doubt that he is quite so right when he says there are other solutions to the financial problems of these journals than increasing the subscription costs. There are other approaches to financing, it is true, but the solution implies to us the solving or resolution of a problem, and, in this context, no final solution is apparent.

We stated in our talk to members of the ACRL's Advisory Committee on Cooperation with Educational and Professional Organizations that centralized searching services as provided by libraries act as an inhibitor on personal subscriptions and on numbers of departmental subscriptions. This is not speculation. It is not criticism. It is not gnashing of teeth. It is simply a statement of verified fact concerning one reason why circulation to individual scientific journals is decreasing annually.

There are many other reasons. The proliferation of specialized journals inherently results in fewer subscribers to each. Inflating production costs and increases in material to be published increase subscription prices, thereby reducing circulation. Sheer magnitude of cost for a variety of subscriptions discourages potential purchasers. Lack of the proper professional and scientific attitudes cannot be overlooked. The extraordinary demands on an individual's time needed to cope with today's living is still another reason. These are all causes and there are others. But none seem more important than the fact that the scientist, who is also an economic man, knows his employer will—indeed, must—make necessary information available to him at no personal cost. This commonly is done through the auspices of centralized searching (information) service. It is resulting in a serious—perhaps crucial—blow to scientific publishers.

How, then, can the ACS continue to publish if it does not raise subscription rates to recover production costs? There are partial answers to the problem and Mr. Randall has mentioned some. The trouble, however, is this. The combined income from all sources still is not sufficient to underwrite the costs of producing our publications.

Mr. Randall has suggested bibliographic

birth control as a way to reduce costs. While the ACS cannot control the birth rate it does perform a type of infanticide. In our primary publications ACS editors reject up to 40 per cent of submissions; as a result, significant contributions may be denied publication. Some fields of chemistry have no publication outlets at all. And what about a secondary publication such as *CHEMICAL ABSTRACTS*? We can limit coverage but what do we use as our criteria for acceptance or exclusion? What is essential to you is anathema to me. What is unimportant in 1935 is crucial in 1960. Limiting material can control costs but the reader loses.

Mr. Randall suggests the sale of advertising. The ACS has the largest and probably the most efficient advertising sales staff of any professional society. Our sales program is extremely successful with certain ACS journals. But advertisers buy circulation selectively. They want only those readers who buy and specify purchases, not research chemists and most college professors since these men do not buy or build plants and do not specify carload lots of materials. Readers of ACS fundamental journals and *CHEMICAL ABSTRACTS* are not primarily buyers or specifiers. While each year the ACS derives several millions of dollars from the sale of advertising in some journals, this money goes to support the entire publication program. It contributes to the costs of all our journals, including those operating in the red.

A page charge to the author has been suggested by Mr. Randall. Such a charge discriminates as between authors. Papers for ACS journals are selected on the basis of merit and not upon the author's ability to pay. How does one levy a charge for an abstract journal? On what logical basis can one ask the supplier of material for abstracts to pay for what he supplies? Consider the administrative impossibility of billing and collecting for over 100,000 abstracts from over 8,000 sources.

Mr. Randall suggests that a charge be levied on the reproduction of material reproduced from journals. The ACS already does this and it is expanding the service although income from this source never will be significant.

There are other sources of income which Mr. Randall has overlooked but the ACS has

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## FROM SCI-TECH'S CHAIRMAN

CHARLES K. BAUER

Although it is too early for any of the Committees to make a progress report on the activities assigned at the 1959 convention, there are some Division achievements which should be brought to the attention of the members.

The voting membership in a mail ballot overwhelmingly approved the By-Laws presented to the membership at the Sci-Tech Business Meeting in Atlantic City on June 2, 1959. Cleo Cason, the official teller, reports that of the 678 ballots returned, 668 were in favor of the By-Laws, 7 were opposed and 3 were not marked. The voting was completed September 30, 1959 and henceforth the Division business and activities will be conducted in accordance with the revised By-Laws.

The Science-Technology Division will operate under the following budget which was submitted to the Division Liaison Officer this fall. The budget is not only required by our By-Laws but is also a requirement of SLA.

The budget for 1959-1960 is as follows:

Estimated Income		
Division Allotment	\$1,511.13	
Scientific Meetings	500.00	
Sci-Tech News Subscriptions	50.00	
Sci-Tech News Advertising	450.00	
		\$2,511.13
Estimated Expenditures		
Section Allotments		
Chemistry	\$91.84	
Engineering	89.84	
Paper and Textiles	8.08	
Petroleum	22.88	
Pharmaceutical	22.56	
Public Utilities	9.12	
		\$ 244.32
Sci-Tech News Printing and Mailing	1,410.00	
Division Supplies, Equipment and Printing	50.00	
Postage (Correspondence)	25.00	
Headquarters Envelopes and Mailing	240.00	
Convention Expense	75.00	
Contingencies	100.00	
Total Anticipated Expenditures	\$2,144.32	
Reserve	366.81	

This will be our first attempt at operating under a budget and the cooperation of all members and officers of the Division is solicited to make it possible to live within our anticipated income.

Subsequent to the Convention, the books of SCIENTIFIC MEETINGS were audited by Paul C. Feist and were found to be correct. Five hundred dollars of the SCIENTIFIC MEETINGS surplus were turned over to the Division treasury.

The books of the Division treasurer were

audited by G. E. Randall and these, too, were found to be in order.

In the minutes of the Science-Technology Advisory Committee Meeting which appeared on p. 4 of the Fall issue of SCI-TECH NEWS, one correction should be made. Philip Leslie raised the question of representation of SCIENTIFIC MEETINGS, not SCIENTIFIC TRANSLATIONS on the Sci-Tech Advisory COMMITTEE. He pointed out that the By-Laws called for the Editor of SCI-TECH NEWS to be a member but disregarded the editor of SCIENTIFIC MEETINGS.

Because this question was not thoroughly discussed at the Advisory Committee meeting, I would like to take this opportunity to give my reaction. Both SCI-TECH NEWS and SCIENTIFIC MEETINGS come under the surveillance of the Publications Committee. The chairman of this Committee represents both publications — or any other which might be established — at the Advisory Committee meeting. Inasmuch as SCI-TECH NEWS is the official bulletin of the Division, the editor of S-TN is on the Advisory Committee to report to the membership the activities and happenings at that meeting, not to represent SCI-TECH NEWS.

A second viewpoint is that SCI-TECH NEWS, being the official bulletin, is a permanent and continuing publication. We all hope that SCIENTIFIC MEETINGS is a continuing publication. It has not only added to the financial well-being of the Division as indicated above, but it represents one of the valid contributions to librarianship made by Sci-Tech Division and its members. It is always possible, however, that the need which it was designed to meet will be ended. And for that reason, it must be considered a potentially temporary publication.

The Sci-Tech Advisory Committee will meet, as is customary, during the period the SLA Advisory Council holds its annual mid-winter meeting. This year the SLA Advisory Council will be held February 11-13 at the Hotel Sherman in Chicago. All members of the Sci-Tech Advisory Committee should reserve February 13 for this meeting. Committee, Section and Chapter representatives should be prepared to submit short written reports at this meeting. Any problems which a Committee member wants discussed at this meeting should be submitted in advance to the Chairman in writing.

C. K. Bauer

A new cover and different heads were used in this issue of SCI-TECH NEWS to improve its appearance. We anticipate the next issue will include additional changes in lay-out and arrangement as part of our effort to bring you a better looking bulletin.



# PROFESSIONAL GROWTH OPPORTUNITIES

FRANK R. LONG

General Supervisor, Technical Information

Atomics International Division, North American Aviation, Inc.

Almost daily one reads about the financial profits to be gained from "growth" situations — fast moving stocks, mutual funds, etc. But very little is said about the growth of an individual within the library profession and its related activities. Company A expands its market position acquiring Company B. Why not expand the Library and the scope of Library management by developing related or supplemental functions? One hears the following advice from the "dollar" professional, "Study your company before investing". The same philosophy is even more sound when investing one's talents in a particular industrial organization — one must pick a growth company, work with it, and contribute to it.

After World War II, many growth companies looked promising, especially in the nuclear field. One in particular appeared to be outstanding to the writer. Its record of financial soundness, progressive management, and product diversification indicated a good potential for career development. In 1950, with the background of a B. S. in electrical engineering and an M. S. in library science, the writer joined North American Aviation, Inc., as the Librarian of the Nuclear Research Department of the Aerophysics Laboratory. At that time, the Library was operating with two clerks. With the award of a U. S. Atomic Energy Commission contract, many research and development reports began to come in from other AEC installations on an automatic basis. These reports, together with standard texts and journals, were organized into the beginnings of a technical library.

In a short time, the company's "growth" aspect began to develop. The Nuclear Research Department was requested to issue reports to other AEC contractors. Since the Library was processing incoming data, it seemed expedient to establish a group to publish outgoing documents under the supervision of the Librarian. Such a proposal was made to management and approved. Here too, the beginning was small — one writer-artist and one typist. The information area now had five people!

During the next several years, these activities gradually increased in scope and production. And as they grew, key personnel added to their knowledge through additional schooling, on-the-job experience, and ex-

change of information with special librarians elsewhere.

Expansion was inevitable and since writers, artists, and typists were preparing the publication for external distribution, it seemed logical that a cost savings could be realized if the data were reproduced within the Department. Two additional functions, adequate photographic services and a print shop, would perform this service as well as provide needed support to technical personnel.

Management was again approached with a new proposal and was apprised of the organizational advantage of such an integrated service. The go-ahead was given and a composite technical information service was born.

During these early years, the Nuclear Research Department went through several name changes, but its goal — commercial application of nuclear power — remained the same. In 1955, the parent corporation took a huge step in its growth activity — the formation of separate divisions, each with its own product fields and separate division management, coordinated through a corporate office. The original Nuclear Research Department became the Atomics International Division, (1) and moved into new quarters in Canoga Park, California. With the move, the Technical Information Department was reorganized into five separate but functional integrated units: Library, Technical Writing, Art and Illustration, Photography, and Reproductions. A supervisor was appointed to head each unit.

A continuous effort was made to improve the quality and quantity of each unit's production while reducing unit costs. The volume of work increased to the point where routine services were subcontracted to typesetting, offset printing, ozalid, and photographic printing vendors. This permitted the Technical Information Department to concentrate on the specialized needs of the Division's personnel.

While the Technical Information organization was expanding, the Library was growing proportionately. In addition to the Supervising Librarian, it soon had a Reference Librarian and a Cataloger to assist in further developing an outstanding Library in the (1) Other divisions are Rocketdyne, Missile Development, Autonetics, and Los Angeles (aircraft manufacturing). The Columbus Division (Ohio) had been formed previously.

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## SECTION, CHAPTER & COMMITTEE NEWS

Space in this feature is open to all Sections, Chapters and Committees. Chairmen who desire to publicize the activity of their organization may do so by sending copy to the editor at least 30 days in advance of the publication date.

### CHEMISTRY

Leslie B. Poland, Chemistry Section Chairman, is looking for suggestions for appropriate projects for his Section to undertake. If there is a chemistry librarian who has felt the need for the product of group action, here is a possible solution. All suggestions should be addressed to Poland, whose address is: Ethyl Corporation, Ferndale 20, Detroit, Michigan.

He would also appreciate receiving any suggestions for short cuts for handling the errata in Beilstein's *HANDBUCH DER ORGANISCHEN CHEMIE*. This request to Poland came to him from Alton P. Juhlin, Secretary-Treasurer of the Geography and Map Division who, in turn, made the request for the Physical Sciences Librarian of Oklahoma State University. This request has already crossed so many organizational and subject lines that suggestions would be welcomed from anyone; the query for suggestions is definitely not limited to Chemistry librarians.

Incidentally, it was Poland, himself, who located the largest number of typographical errors in the last issue of *SCI-TECH NEWS*. We are embarrassed to admit he located 13 and then returned the dollar he had been sent that the editor might use it to find solace!

### PETROLEUM SECTION

Paul Knapp, Petroleum Section Chairman, states that the Section election has been held, the ballots counted and the following installed as officers:

#### Vice-Chairman:

Miss Maryann Duggan, Supervisor  
Technical Library  
Field Research Laboratory  
Magnolia Petroleum Co.  
P. O. Box 900  
Dallas 21, Texas

#### Secretary-Treasurer:

Miss Aphrodite Mamoulides  
Technical Librarian  
Exploration and Production Research  
Division  
Shell Development Co.  
P. O. Box 481  
Houston 1, Texas

Paul Knapp's election as chairman, and his address, were reported in the Fall issue so they will not be repeated here.

### NEW YORK CHAPTER

The New York Chapter has established a Committee on Science-Technology Resources with Anne McCann as Chairman. The charter membership of the Committee consists of the representatives from the libraries of the American Iron and Steel Institute, American Petroleum Institute, Chemists' Club, Columbia University, Engineering Societies, Institute of Aeronautical Sciences, and Science-Technology Division of the New York Public.

The Committee's first objective, according to its published program, will be to study existing information sources and to consider the need for published guides to facilitate their use. It is the hope of the Committee that improved communication among libraries will encourage selective acquisition by the individual libraries in order to assure strength in all subject fields of interest without unnecessary and expensive duplication.

### ASTIA COORDINATION COMMITTEE

The ASTIA Coordination Committee, headed by Michael O. Friedlander, has been active from the date of its formation and is tentatively scheduled for a formal meeting with ASTIA representatives on November 24-25, 1959.

Friedlander selected his Committee at the SLA Convention and within three weeks sent a formal inquiry to each to list deficiencies of which they were aware in the ASTIA policies, bibliographic tools, and services.

The Committee included Margaret Anderson, Lois Brock, Scott Kennedy, Robert Fidothen, Jeanne North, John H. Richter, Marguerite Ritchie, Barbara Spence and Rebecca Taggart.

Response from the members of the Committee provided Friedlander with 24 topics for the agenda of the meeting with ASTIA. These topics range from broad policy considerations of need to know and service area limitations to specific requests for cumulated indexing. The objective of the Committee is to bring the resources of the Science-Technology Division to bear on the problems experienced by ASTIA in the effort to assist ASTIA in providing the types and quality of service both it and the members of the Division desire.

## THE MAIL BAG

### THE BIDDING SYSTEM

Ralph Lessing

Assistant Vice-President, Stechert-Hafner, Inc.

Your article "The Bidding System" was of great interest to us. The problem of bidding is indeed a serious one and it is for that reason that we take the liberty to take issue with your editorial.

Granted that much material purchased by the library can be bought at good quality at lowest prices bid, we contend that periodical subscriptions pose a different problem. Quality of merchandise does not enter the picture at all—after all, each subscriber's copies are of the same quality as any others—; what matters is the service, the speed with which the subscription is entered, the attention given to the inevitable claims for missing or overdue issues, the many services which cannot be included in the specifications, such as bibliographical help, free samples of new journals, etc.

No matter how carefully the specifications are worded, there are a great number of intangibles, such as promptness in answering letters and accuracy of reports, which one cannot evaluate until after the contract has been awarded. Any library which has ever given a contract to an inept subscription agent can tell you that the damage may dog them for many years to come, some missing numbers, which were not claimed promptly enough, may never be found at all. We do not advocate a library's placing its order when it knows that it will be overcharged but we are certain that whenever bids are asked for, the price will be the decisive criterion and not the many facets of service.

For that reason, this firm has often abstained from bidding altogether. Why waste time (and bidding is costly and time consuming) if it is a foregone conclusion that somebody will get the contract for a few dollars less? By the way, who do you think will pay in the last analysis for the cost of bidding? Will it not be the customer?

Finally, as we have often stated, a bid does not even guarantee lowest prices, additional charges may land the library in the end with the most expensive and the most inefficient agent.

**ED. NOTE:** The intangibles of service are difficult to translate into a dollar value and the editor agrees with Mr. Lessing that the

librarian runs a considerable risk in depending on the bidding system to select a subscription agency.

\* \*

R. R. Dickison

Chief Librarian, Oak Ridge National Laboratory

... Judging from the context of your editorial, you meant to advise doing business with the lowest acceptable bidder. The inadvertent omission of the qualifying adjective, if I am correct in assuming that it was inadvertently omitted, has lead to a kind of classic description of how this problem is solved in a good many organizations. The librarian evaluates, considers, may even do more, then all this is thrown out and the business goes to the lowest bidder.

**ED. NOTE:** The low bid is not always determined by the amount after the dollar sign on the quotation but must be augmented by the cost to the library to bring the service up to the desired level. This was intended by the phrase "consider all of the factors." The reply to Dickison admitted that, if the editorial were to be rewritten, his addition would be included in the last sentence.

\* \* \*

E. F. Notaro

Bay State Periodical Service, Boston, Mass.

I have found your editorial "The Bidding System" a most interesting one, but I have also found myself agreeing on many points with Mr. Ort's view as presented in the Mail Bag.

Your admonition to "evaluate the bids carefully—and then do business with the lowest bidder," comes as something of a surprise to a subscription agent whose experience it has been that librarians would not be perennial shoppers for the lowest bid—were it not made mandatory by their boards or management.

I speak, of course, of librarians who are receiving fair prices and good service in the handling of their orders—prompt attention to their claims—adjustment of their supplementary orders to a uniform expiration—and who appreciate the many little details which make for good service but which are not obvious to the ordinary subscriber.

We do not condemn bidding as an evil, but it is sometimes a nuisance, particularly when requests are made by boards or managements which require three bids in order



to select an agency. We know that in many cases the present vendor agrees to meet any bid—the others have been invited to quote as a formality, and have wasted valuable time. There are also those who request bids with no real intention of changing agents, but just to make sure that the current vendor stays in line.

We believe that the evaluation of bids and services should be in the hands of those competent to consider the factors—and these are the librarians. The decisions, however, are too often made by those who have little or no knowledge of library requirements.

Unfortunately, the questionable ethics of some agencies in offering trade catalog rates to some libraries, makes it difficult for a librarian to present to a board the advantages of service over price.

The handling of library subscriptions has always been a specialized field, and it is more so today than ever. There is no economy in a low bid which has only its price to recommend it. Why then, settle for less than the best?

If you must take bids and your present agent is handling all details to your satisfaction—and the price is right—present the facts and stress the continuity of service to your board. If a change is desirable, be guided by the recommendations of other librarians as well as by the services offered by the new agent, but do not let the lowest price be the deciding factory.

\* \* \*

**Carl F. Zibart**

**Zibart's Book Store, Nashville, Tennessee**

I read with interest the article by Mr. J. George Ort of Art Guild Bindery and would appreciate an opportunity to reinforce what he had to say by a supplier of a different type of service.

As an independent book store operator who is well pleased to act as a vendor to a limited number of special libraries and industrial accounts, I would like to stress its advantages to all concerned.

A book is a book is a book to paraphrase Miss Stein and why not purchase it from the cheapest possible source? Well, it just happens that the price is not the total story as any librarian, with more than 30 days' experience, will readily testify. 1. There is accuracy and clarity in invoicing. 2. There is speed and dependability of performance. 3. There is tenacity and resourcefulness in obtaining hard-to-locate materials. These are a few important considerations that come to mind. There are others. Here again we are talking about tangibles that don't get into bids.

Large wholesale suppliers, because of their buying advantages, can and usually do, offer

price considerations that the local store cannot meet. Yet, I feel that independent stores can service special libraries so much more efficiently than a remote wholesaler that the price differential is more than compensated for.

\* \* \*

We received one other comment from a vendor who preferred to remain anonymous. He felt that the bidding system might be all right if the evaluation were done by a professional librarian. However, when the bid evaluation is made by a procurement or library clerk who lacks the ability and knowledge to evaluate the intangibles such as service, who can not tell when the price quoted is last year's price, then the bidding system is unsatisfactory both to the vendor and to the library.

\* \* \*

#### MISCELLANEOUS MAIL

Nineteen new subject categories and 1000 new periodical titles are included in the 9th edition of "Ulrich's Periodicals Directory" according to a press release from R. R. Bowker. The Sci-Tech librarian who feels snowed under by the growth of the literature in his field should have some compassion for the theological librarian. The Natural and Physical Sciences section shows an increase of 40 titles for a total of 285 in this edition; the number of titles under Religion and Theology has jumped 124 to a total of 436! Perhaps we are not as bad off as we had thought we were. The price of the 9th edition, incidentally, is \$22.50 delivered.

\* \* \*

Within the next couple of years, librarians will have a better basis of evaluating the relative efficiency of four major indexing systems. Cyril Cleverdon, Librarian, College of Aeronautics at Cranfield, England, is director of the National Science Foundation sponsored study which will index some 18,000 research reports and periodical articles by UDC, alphabetical subject headings, the facet classification, and uniterms. The effectiveness of the four indexing systems will be checked by using 2000 questions compiled by members of the scientific and technical staffs of the cooperating organizations.

Preliminary planning went on for months before the indexing staff started to work. The inevitable concern with systems and experimentation required several months more of basic work before a position of reasonable stability was reached. But by June 1959, 10,000 documents had been indexed. Invitations were extended to some 300 librarians, including some in the U. S., to cooperate in the project. And by October, question and indexing cards, as well as ample instructions,



were mailed to those who responded to the invitations.

The testing of the various systems will be done in 1960 and the report on the project is planned for completion by mid-1961.

Technical Services, P. O. Box 2067, Denver, Colo., has put a catalog service called "Vendor Specs Micro File" on the market which should prove of interest to purchasing agents and design engineers, as well as to librarians, of aeronautical concerns.

In essence, the service groups on consecutive microfilm frames, the catalog pages of all companies supplying a particular item or component part. The design engineer is able to view and compare the specifications, prices, and other data of all manufacturers without extensive searching through a variety of catalogs. According to Richard H. O'Brien, vice president and general manager of Technical Services, the system will save 90% of the six hours per week the average design engineer now spends in this activity.

The service is thoroughly indexed and covers all possible terms an engineer might use to name a product. The firm also promises to make complete revisions of the files every four months to keep the service up to date.

While the service is currently limited to the aircraft industry, micro-files will be designed for other industries, such as communication equipment, electronics, automotive, and machinery in 1960.

#### READER RESPONSE

In the fall issue we sent out an SOS to assist us in locating possible advertisers for the 1960 issues of SCI-TECH NEWS. The response was excellent; we received the names of over forty firms which were considered by our readers to be potential advertisers. Even one potential advertiser wrote in himself to check up on space rates!

Such cooperation should be publicly acknowledged. Our contributors included Mildred Benton of the Naval Research Laboratory, Gertrude Clark of The Stuart Company, Anna Coleman of Dow Corning, Maryann Duggan of Magnolia Petroleum, Andrew Glick of Lockheed, Thelma Hoffman of Shell Development, W. A. Kozumplik of Lockheed and Marylee Sturgis of Koppers.

If SCI-TECH NEWS becomes less of a burden to the Division Treasury in 1960 because of advertising revenue, it will be due to members, such as those listed above, who have furnished us the necessary leads.

#### SCI-TECH NEWS STAFF

For the first time in twelve years SCI-TECH NEWS is appearing without a contribution by Gertrude Schutze, the compiler of

"Documentation Digest." Gertrude has spent the last several months on a book she plans to publish in 1960 and in October she realized that it was impossible to carry two such major projects in her spare time. So that she might devote all of her time to the book she asked to be relieved, for at least a year, of Documentation Digest.

The members of the Division owe a real debt to Gertrude. Documentation Digest has been a primary contribution to the validity of SCI-TECH NEWS. In the summer issue (p. 15) we pointed out that neither LIBRARY LITERATURE nor AMERICAN DOCUMENTATION covered the field of documentation as completely nor as promptly as did "Documentation Digest."

Those of you who have used "Documentation Digest" and have not had the opportunity to meet and thank her might well do so now. A letter of appreciation addressed to her at 801 Crotona Park North, New York 60, N. Y. would be well received.

Frank G. Bennett IV is joining SCI-TECH NEWS as Associate Editor with this issue. The contribution from Frank Long is a result of his efforts and he already has several articles promised for the next issue. Frank has served as editor of the Southern California Chapter Bulletin for the past two years and produced a highly readable publication. His California readers might admit they didn't always agree with Frank, but they did read his Bulletin.

We anticipate that Frank will bring a sprightliness to S-TN that we have needed. We also expect him to coerce some of his West Coast friends and others into producing those readable articles for which the Southern California Chapter Bulletin was known.

With Bennett and Glick on the West Coast, Mildred Benton in Washington and your editor a confirmed Tennessean, the S-TN staff claims a geographic coverage that is unusual for a library publication. We could use even better geographic representation than we now have. Ambitious Sci-Tech members who are willing to contribute an inordinate amount of time, energy and ingenuity for the good of the cause are invited to write the editor.

G. E. Randall

#### SUBSCRIPTION RENEWAL

Subscriptions to SCI-TECH NEWS are written for the calendar year and they expire with this issue. A check for \$1.00, made out to "Science-Technology Division" and sent to the Editor, Sci-Tech News, AEDC Library, Arnold Air Force Station, Tenn., will bring you the issues published in 1960. Science-Technology Division members receive their copies automatically.

# SCIENCE-TECHNOLOGY SERIALS

Compiled by

ANDREW S. GLICK

Contributors to this issue include Mr. Walter Shelton of the John Crerar Library, Miss R. McIntosh of the Los Angeles County Medical Association and Miss Judy Schnieber of Lockheed Aircraft Corp.

## A.M.A. ARCHIVES OF NEUROLOGY AND PSYCHIATRY

Beginning with July 1959, will be separated into two journals, i. e. ARCHIVES OF NEUROLOGY and ARCHIVES OF PSYCHIATRY. American Medical Association, Chicago 10, Ill.

## AGRICULTURAL AVIATION

Vol. 1, No. 1, 1959, quarterly, \$3.50. European Agricultural Aviation Centre, The Hague, Netherlands.

## ARCHIVES OF ORAL BIOLOGY

Vol. 1, No. 1, Mar. 1959, bi-monthly, \$17.00. Pergamon Press, New York.

Published papers concerned with every aspect of investigation of the oral and dental tissues and bone, their environment and functions from the standpoint of anatomy, physiology and chemistry. Will also contain occasional reviews, articles, book reviews.

## ASTRONAUTICAL SCIENCES REVIEW

Vol. 1, No. 1, Jan. 1959, quarterly, \$4.00. American Astronautical Society, New York. Will provide comprehensive coverage of advances in space technology.

## AUDIO ENGINEERING SOCIETY. JOURNAL.

Publication in arrears. Two 1957 issues remain to be published, which are scheduled for release as soon as possible.

## BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS

Vol. 1, No. 1, Sept. 1959, bi-monthly, \$12.00. Academic Press, New York, N. Y.

To meet the need for rapid dissemination of information in all areas of experimental biology.

## BIOLOGICAL ABSTRACTS

Beginning with Volume 35 (1960) subscription price increased to \$170.00.

## BOLETIN MEDICO

Vol. 1, No. 1, 1957, semi-annual, NFS; available on exchange basis. Sociedad de Medicina y Cirugia, Pinar del Rico, Cuba. Official organ of the society.

## CHEMICAL ABSTRACTS

Subscription price for 1960 increased to \$32.00 for members, \$150.00 for college and university libraries and \$570.00 to others.

## CHEMICAL REVIEWS

Effective with Volume 60 (1960) publisher

changed to American Chemical Society, Washington, D. C.

## COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY

Vol. 1, No. 1, Autumn 1959, quarterly, \$17.00 to Libraries, \$10.00 to private subscribers per volume. Pergamon Press, New York.

Will publish papers which contain the results of original research on the biochemistry and physiology of animals, vertebrate, and invertebrate. Will contain occasional review articles, reports of meetings, book reviews in the fields of biochemistry, physiology, and zoology. Preferred language for papers will be English, but papers in French or German will be accepted.

## CZECHOSLOVAK JOURNAL OF PHYSICS

Originally scheduled for translation by Consultants Bureau. Cancelled for lack of response.

## DECIMAL CLASSIFICATION, ADDITIONS, NOTES AND DECISIONS

Quarterly, 1959, free. Benjamin A. Custer, Decimal Classification Office, Library of Congress, Washington.

## DRUG AND CHEMICAL EXPORTS (BRITISH)

Discontinued with June 1959 issue.

## GERONTOLOGIA CLINICA

Vol. 1, No. 1, 1959, quarterly, \$9.25. S. Karger, New York.

Will publish original papers and editorials by well-known authorities in ways ageing affects the individual and his relation to society, and methods of preventing and correcting breakdown.

## HAVANA. HOSPITAL PSIQUIATRICO. REVISTA

Vol. 1, No. 1, Apr. 1959, quarterly, \$6.00. Hospital de Dementes de Mazorra Santiago de las Vegas, Cuba.

Official publication of the National Health and Mental Center.

## ICSU REVIEW (NETHERLANDS)

Vol. 1, No. 1, Jan. 1959, quarterly, \$4.50. International Council of Scientific Unions.

Contains information about the activities of the ICSU and member unions. Will also provide a forum for discussion of problems of interest to its members.

## IGY BULLETIN

Earlier plans called for its demise in June 1959, but it will now continue through June 1960. Twelve issues for \$2.00 and entire set of thirty-six issues for \$6.00.

## INDIAN CHEMICAL ENGINEER

Vol. 1, No. 1, Apr. 1959, quarterly, \$2.00.

Indian Institute of Chemical Engineers, Calcutta, 32, India.

The quarterly journal of the Indian Institute.

#### **INDUSTRIAL HYGIENE REVIEW**

Vol. 1, No. 1, Dec. 1958, to be published. "several times each year," evidently gratis.

Industrial Hygiene Review, New York 13, N. Y.

Supersedes the MONTHLY REVIEW formerly published by the Department.

#### **JOURNAL OF INSECT PATHOLOGY**

Vol. 1, No. 1, Apr. 1959, quarterly, \$15.00. Academic Press, New York.

Designed to provide a common publishing medium for contributions concerned with all phases of insect pathology.

#### **JOURNAL OF LIPID RESEARCH**

Vol. 1, No. 1, Sept. 1959, quarterly, \$6.00. Editorial Offices, University of Tennessee, Memphis, Tennessee.

#### **JOURNAL OF PHYSICAL CHEMISTRY**

Subscription price for 1960 increased to \$24.00.

#### **MATHEMATICAL REVIEWS**

Publication in arrears. Feb. issue released in July. March issue scheduled for Aug., Apr. in Sept.

#### **NEW MEDICAL MATERIA**

Vol. 1, No. 1, Jan. 1959, monthly, \$6.00 yr. New York 19, N. Y.

#### **NUCLEAR DATA SHEETS**

Vol. 1, No. 1, 1958, irregularly, \$17.00 paper stock, \$20.00 card stock. National Research Council, Washington 25, D. C.

Accumulated and continually revised system of presenting data on radio activity and nuclear energy levels. About 1000 sheets (8½ x 11) completed in 1958 and 1959. References are given. Replacements issued when new experimental results are published.

#### **NUCLEAR THEORY INDEX CARDS**

Vol. 1, No. 1, 1958, irregularly, \$5.00. National Research Council, Washington 25, D. C.

Accumulated system for theoretical papers in low energy nuclear physics. Index system on 3 x 5 cards with topics in nuclear structure, nuclear reactions, electromagnetic radiation, beta decay and parity, alpha decay, and tables and computational aids. A total of 35 sub-categories included. Cards contain titles of articles, authors, institutions, paging, and literature references.

#### **NUTRITO EL DIETA**

Vol. 1, 1959, quarterly, \$7.50. S. Karger, New York.

A European review devoted to the study of nutrition of man. Will collate the research of European authors devoted to the problems of human nutrition and accepting work on animals when applicable to the human problem.

#### **OPTICAL SOCIETY OF AMERICA. JOURNAL.**

Price increased to \$25.00.

#### **PHARMINDEX**

Vol. 1, No. 1, Jan. 1958, semi-monthly, \$24.00.

#### **PharmIndex, Portland, Oregon.**

Product information with cross-references to trade name, manufacturer, therapeutic use, and generic title. Full formulae, dosages, packaging, and prices given. Of interest to pharmacists and others in the pharmaceutical field.

#### **POWER TRANSMISSION DESIGN**

Vol. 1, No. 1, Jan. 1959, monthly, \$7.00. Industrial Publishing Company, Cleveland 15, Ohio.

#### **PSYCHOPHARMACOLOGIA**

Vol. 1, No. 1, Aug. 1959, irregularly, \$9.60 for 1959, \$19.20 for 1960. Walter J. Johnson, Inc., New York.

#### **QUARTERLY CUMULATIVE INDEX MEDICUS**

Discontinued with June 1959 issue. AMA plans to resume publication of a medical index in 1961. Plans to be announced.

#### **RAYVEDKA I OKHRANA NEDR.**

Vol. 1, No. 1, Jan. 1958, monthly, \$8.50. Bureau of Geological Research, Paris 15, France.

#### **REVISTA ARGENTINA DE CANCEROLOGIA**

Vol. 1, No. 1, 1959, monthly, \$8.00 yr. Argentine Society of Cancerology, Corrientes 2763, Buenos Aires, Argentina.

#### **REVISTA BRASILEIRA DE RADIOLOGIA**

Vol. 1, No. 1, Jan.-Mar. 1958, quarterly, \$5.00 yr. Revista Bras. de Radiologia, Sao Paulo, Brazil.

Organ of the Colegio Brasileiro de Radiologia.

#### **ROYAL INSTITUTE OF GREAT BRITAIN. PROCEEDINGS.**

Beginning in Jan. 1959 journal will be published three times a year instead of annually.

#### **RUSSIAN PATENTS GAZETTE**

Vol. 1, No. 1, Jan. 1959, semi-monthly, \$120.00 complete set; the General, Mechanical, and Electrical section, and Chemical and Chemical Engineering section at \$80.00 each. London, Technical Information Company.

English language abstracts of all new Russian patents and inventions arranged under 91 classified headings. Copies of Russian patents supplied for \$1.20 each and trans. of patent specifications available to subscribers for \$6.00.

#### **SOLID STATE ELECTRONICS**

Vol. 1, No. 1, Winter 1959, bi-monthly, \$20 to libraries, \$10.00 to private subscribers. Pergamon Press, New York.

Devoted to area between fundamental solid state physics and circuit engineering. Will cover transistor technology in all its aspects, crystal growing and handling, application of contacts, crystal detectors, and power rectifiers, design of galvanometric devices, thermoelectric properties and applications, electroluminescence, photoconductors and photovoltaic cells, solid state batteries; and problems concerning encapsulation.



### STRAIN GAGE READINGS

Vol. 1, No. 1, 1959, bi-monthly, \$12.00. Stein Engineering Services, Phoenix, Ariz.

### TRANSLATION INQUIRER

Vol. 1, No. 1, 1959, monthly, \$2.00. Dr. Alexander Gode, Science Service, Interlingua Division, New York 3, N. Y.

### USSR PATENTS AND INVENTIONS

Vol. 1, No. 1, Summer 1959, monthly \$1.50. New York, Pergamon.

English trans. of Soviet BULLETIN AND ABSTRACT JOURNAL. Gives information on approximately 10,000 USSR patents granted annually, including patent specifications and applications as well as descriptions.

### WORLD AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY ABSTRACTS

Vol. 1, No. 1, 1959, quarterly, \$12.50. North Holland Publishing Company, Amsterdam, Holland.

Will provide rapid and complete information on contents of publications in subject fields. Summaries and abstracts will be in English.

### WORLD SCIENCE REVIEW (BRITISH)

Suspended with the April issue.

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## PROFESSIONAL GROWTH OPPORTUNITIES

(Continued from Page 5)

field of nuclear work and related technology. The professional librarians are now assisted by 18 semi-professional and clerical personnel in operating a central library, a classified library, and two branch libraries. In performing these services for the technical personnel of the Division, they draw on the following sources of information: 8,500 books and bound journals; 175,000 documents; 5,000 reprints and brochures; 6,000 vendor and instrument catalogs; and 400 technical periodicals.

Early in 1960, Atomics International will move again — into its new world headquarters buildings, just a few miles from the present location. From the new facility will come coordination and guidance for a rapidly developing world-wide operation. Division activities have grown to include the sale of 15 laboratory, research, and power reactors to universities and private enterprises both in the United States and abroad. Liaison offices, affiliates, and licensee agreements have also been established in foreign countries.

During the past ten years, Technical Information's growth has been from 5 to 110 personnel. The growth and development of the Technical Information Department now functioning at Atomics International is a perfect example of the opportunities open to professional Librarians. With the vision to select a good "growth" company, and the foresight to plan for each next logical area for expansion, Technical Information specialists can perform a rewarding service in this era of technology.

## COMING ATTRACTIONS

C. G. Stevenson, Manager, Technical Information of General Electric Company's Hanford Works, has promised an article relating to work standards for an issue in 1960. In the correspondence concerning the article, Mr. Stevenson called attention to a thesis done by Robert Elfman at the University of Minnesota entitled "Library Cost Studies—Industrial Engineering Versus Cost Accounting Techniques." Mr. Stevenson feels that the industrial engineering concept has not received the consideration by librarians that it deserves.

John Binnington, Head, Research Library at Brookhaven, will cover the subject of translations for the spring issue. Mr. Binnington's concern with translations goes back to the days when Brookhaven was issuing translated contents pages of Russian journals. Subsequently he became chairman of the Translation Pool and represented SLA at a European conference on translations.

# BIBLIOGRAPHY DIGEST

Compiled by  
MILDRED BENTON

## AGRICULTURE

### 129. Annotated bibliography of recent literature on soil moisture.

Geza Thuronyi. METEOROL. ABS. and BIBL. 10:423-461, Mar. 1959.

137 annotated references (plus 62 non-annotated references taken from the Bibliography of Agriculture) on the subject of moisture captured in the soil by capillarity or adhesion (not the free water or the chemically bound constituent water) with emphasis on methods and instruments for its measurement. Most of the material was published since 1954.

### 130. Bibliography of methods of determining soil moisture.

Mark D. Shaw and Williams C. Arble. University Park, Pa., Pennsylvania State University, June 1959. 152p.  
(Contract DA 36-039-sc-78125)

Consists of 629 references, with abstracts, to technical papers and patents. References are grouped under principal methods of soil moisture determination: chemical, electrical, gravimetric, lysimeter, nuclear, penetrometer, tension, and thermal.

### 131. Bibliography relating to vibratory cutting, penetration and compaction of soils.

Stephen C. Cowin, Robert L. Kondner and Robert S. Ayer. Baltimore, Md. Johns Hopkins University, Jan. 3, 1958. 37p. (Tech Rept. 2) (AD 160 028)

This bibliography which includes 212 references, (mostly with summaries) represents an extensive search of the literature in soil mechanics, soil physics, engineering, geology, and agriculture relating to the vibratory cutting, compacting, and penetration of soils, and on related topics such as vibrated concrete, vehicle mobility, and application of ultrasonic vibration. A supplement with 378 references has been issued as Tech Rept. 3, Suppl. 1 to Tech. Rept. 2), AD-200 147.

### 132. New agricultural bibliographies.

Rudolf Lauche. INTERNATL. ASSOC. AGR. LIBRARIANS & DOCUMENTALISTS. Q. BULL. 4:151-183, July 1959.

A listing, by country and then by subject, made possible by contributions from American, British and German sources.

### 133. Radioisotopes in agriculture: Animal husbandry, bacteriology, fertilizer uptake, plant physiology, photosynthesis, and entomology. A selected list of references.

J. A. McCormick. Oak Ridge, Tenn., Atomic Energy Commission, Technical Information Service, Jan. 1959. 67p.

This bibliography contains 1335 references selected from scientific journals published during 1948-1957. Available from OTS.

### 134. Soybeans, some botanical aspects, a selected list of references.

Nellie G. Larson. Washington, D. C., U. S. Department of Agriculture Library, Aug. 1959. 24p. (Library List 67)

Genetics, breeding, physiology and biochemistry are the aspects covered in this annotated bibliography of English and Japanese articles published during 1930-1958.

## AMPLIFIERS

### 135. Variable-reactance parametric amplifiers: A selected bibliography.

Elden K. Shaw. Wright-Patterson Air Force Base, Ohio. AF Wright Air Development Center, Mar. 1959. 5p. (WADC Tech. Note. 59-90) (AD-212 563.)

About 40 references to report and periodical literature on the theory, analysis, design, and operation of variable-reactance parametric amplifiers.

### 136. Wideband amplifiers and related topics: A selected bibliography.

N. DeClariss and J. D. Douglass. Ithaca, N. Y., Cornell University, School of Electrical Engineering, Oct. 15, 1958. 112p. (Res. Rept. EE 402) (Tech Rept. 38)  
(Contract DA 36-039-sc-64646)

Includes about 300 references in two categories — main, and supporting. In addition, 52 of these are listed separately with abstracts.

## CORROSION

### 137. Bibliography on pumps for corrosive liquids.

E. McCoy. Resley, Warrington, Great Britain, Atomic Energy Commission, 1959. 15p. (I. G. Info. Series 72 (RD/CA)

Approximately 100 references, some with annotations, are listed under general corrosion problems in chemical and allied industries; methods and operations; materials and construction; pumping of mine and well waters; and corrosion of pumps. Obtainable from H. M. Stationery Office.

### 138. Design from the viewpoint of corrosion.

W. D. Clark. METALLURGICAL REV. 3:279-325, 1958.

This survey of 75 references covers economic factors affecting design; choice of materials; hazards (environmental, abnormal, geometrical, metallurgical); protective measures; storage and erection.

### 139. Deterioration of anodized aluminum exposed to corrosive environments.

J. M. Kape. ELECTROPLATING & MET. FINISHING 12:41-46, 59, Feb. 1959.

Review of the literature (23 references) on the resistance of anodized Al to surface deterioration due to weathering and to chemical action; best methods presently available for producing anodic films with maximum corrosion resistance.

### 140. Studies on the corrosion behavior of non-drying oils and greases with special



reference to modern lubricants and metal protectives.

Bukowiecki, A. SCHWEIZER ARCHIV. 25:126-143, Apr. 1959.

This article, which is in German, includes a bibliography of 245 references.

### CRYSTALS

141. Crystal growth: Comprehensive bibliography of journal articles and unclassified reports 1951-1957.

F. G. Bennett. Washington, D. C., Atomic Energy Commission, 1958. 37p. (Rept. SR-2693)

A review with 545 references.

142. Directional breakdown effects in crystals.

J. W. Davisson. In Progress in Dielectrics, ed. by J. B. Birks and J. H. Schulman, v. 1, p. 59-96, London, Heywood and Co., 1959.

Includes 65 references.

143. Growth of metal crystals.

R. W. K. Honeycombe. METALLURGICAL REVIEWS. 4:1-47, 1959.

A survey based on 162 references. Methods available; growth from the melt; growth in the solid state alloy crystals. Handling of metal crystals; imperfections in single crystals.

### DIELECTRICS

144. Dielectric breakdown in solid insulation.

J. H. Mason. In Progress in Dielectrics, ed. by J. B. Birks and J. H. Schulman, v. 1, p. 1-58, London, Heywood and Co., 1959.

A comprehensive review, mainly devoted to work since 1950, including 115 references.

145. Digest of literature on dielectrics, v. 22, 1958, prepared by the Committee on Digest of Literature of the Conference on Electrical Insulation, Division of Engineering and Industrial Research.

R. A. Soderman and L. J. Frisco, eds. Washington, D. C., National Academy of Sciences — National Research Council, 1959. 293p. (Pub. 713)

Subject breakdown by chapter is as follows (each includes an extensive list of references): instrumentation and measurements; table of dielectric constants; molecular and ionic interactions; conduction phenomena; ferroelectric and piezoelectric materials; ferromagnetic materials; rubber and plastic insulation; insulating films; insulating liquids and their applications; ceramic insulation; engineering applications.

146. Literature on preparation, purification and dielectric properties of  $Al_2O_3$ . An annotated bibliography.

Dorothy Ager. Pittsburgh, Pa., Westinghouse Electric Corp., 1958. 19p. (Quar. Rept. 1, Appendix B).

90 references.

147. Non-oxide ceramic dielectrics.

Popper, P. In Progress in Dielectrics, ed. by J. B. Birk and J. H. Schulman, v. 1, p. 217-269, London, Heywood and Co., 1959.

This review of the preparation, properties and applications of the nitrides of boron, silicon and aluminum includes 188 references.

148. Research on polymeric bonding systems and their dielectric behavior.

R. B. Anderson and M. M. Sprung. Schenectady, N. Y., General Electric Research Laboratory, Mar. 1959. 68p. (WADC Tech. Rept. 59-61) (Contract AF33(616)-5535)

A literature review is given of boron polymers, with emphasis on those that have boron-oxygen-silicon backbones, and pyridyl and other nitrogen-substituted silanes. Experimental work is also reported. Includes a listing of 125 references.

### DIFFUSION

149. Diffusion and conduction in ionic solids.

Edward A. Geiss. Alfred, N. Y., Alfred University, July 1958. 121p. (AFOSR-Tech. Note 58-910) (AD-202 408) (PB 136 768)

A doctoral thesis containing a bibliography of 112 references.

150. Diffusion in metals.

P. Shewmon. INDUS. ENG. CHEM. 51:402-405, Mar. 1959.

Recent experimental and theoretical research is reviewed. A bibliography is presented containing 106 items (covering 1957-1958) grouped under the following headings: alloy diffusion; diffusion in pure metals; off-diagonal terms; diffusion in liquids; diffusion of interstitials; diffusion along surfaces.

151. Mechanism of diffusion in the solid state.

C. E. Birchenall. METALLURGICAL REVIEWS. 3:235-277, 1958.

Includes a bibliography (non-annotated) of 176 references.

### ELECTROLUMINESCENCE

152. Bibliography on electroluminescence and related topics.

H. F. Ivey. INST. RADIO ENGRS. TRANS. ED-6:203-215, Apr. 1959.

Includes 720 non-annotated references (including patents) arranged in sections as follows: general; effects of electric fields in solids; electroluminescence in zinc sulfide; in other materials; field effects in excited phosphors; galvanoluminescence; applications; patents.

153. Electroluminescence: A selected bibliography.

Philip K. Trimble. Wright-Patterson Air Force Base, Ohio, Wright Air Development Center, Electronic Components Laboratory, Apr. 1959. 18p. (WADC Tech Note 59-110) (AD-213601)

References to periodicals and reports covering the full range of information on electroluminescence from the theoretical aspects to practical applications. A useful feature is the breakdown into the various subjects or aspects. The subjects are then cross-indexed with the references.

### FERROELECTRICITY

154. Bibliography on ferroelectrics.

R. Hall. Mountain View, Calif., Sylvania Electric Products, Inc., Electronic Defense Laboratory, Jan. 9, 1959. 99p.

(Rept. M-165) (Contract DA 36-039-sc-75012)

Contains over 1,000 non-annotated references analyzed and arranged by index number according to 50 categories of interest because of their connection with possible microwave applications.

**155. Effects of nuclear radiation of magnetic and ferroelectric materials and quartz. A literary survey.**

S. I. Taimuty. Menlo Park, Calif., Stanford Research Institute, July 28, 1959. 22p. (Sci. Rept. 2) (AFCRC-Tech. Note. 59-563) (Contract AF19-(604)-4141)

66 references are included in this study which is limited to effects of radiation on the magnetic and dielectric properties of ferromagnetic materials, ferrites, ferroelectric materials, and quartz.

**156. Ferroelectricity of barium titanate single crystals.**

A. D. Franklin. In Progress in Dielectronics, ed. by J. B. Birks and J. H. Schulman, p. 171-215, London, Heywood and Co., 1959.

A comprehensive review including 64 references of recent experimental and theoretical work in this field. Sections are devoted to the crystal chemistry of barium titanate, the preparation of crystal specimens, the classification of ferroelectric properties, and detailed discussion of the static properties and the dynamic properties.

**FISHES**

**157. The chemistry of fish blood. A bibliography.**

J. B. Hunn. Army Chemical Center, Md., Army Chemical Warfare Laboratories, May 1959. 22p. (Spec. Pub. 2-22)

An attempt to bring together by means of bibliographic citation the scattered literature from a wide variety of journals, in many languages. No annotations.

**158. Current bibliography for aquatic sciences and fisheries.**

Rome, Italy, Food and Agriculture Organization of the United Nations. Mar. 1959. (FAO/59/5/3344)

Prepared by the Biology Branch, Fisheries Division. Contains over 1,000 annotated references; and taxonomic, geographic and author indexes.

**HUMAN ENGINEERING**

**160. Annotated bibliography of applied physical anthropology in human engineering.**

Robert Hansen and D. Y. Cornog. Philadelphia, Pa., H. L. Yoh Co., May 1958. 301p. (WADC Tech. Rept. 56-30) (Contract AF33(616)-2353) (AD-155 622) (PB 151 447)

Condensations of 121 reports in the field of applied physical anthropology grouped under three headings: anthropology, biomechanics, and comfort; a few are included in a general group.

**161. Bibliography of sensory deprivation, isolation and confinement.**

B. B. Weybrew. New London, Conn., Naval Medical Research Laboratory, May 4, 1959. 6p. (MR 59-1)

This non-annotated 83-item bibliography was compiled in connection with studies of stress associated with

long continued submerged cruises in submarines, as experienced in ICBM submarines, for example.

**162. Human Engineering bibliography, 1956-1957.**

Washington, D. C., Office of Naval Research, Oct. 1958. 360p. (ACR-32)

Two major considerations — ease of use and appropriate selection of materials — strongly influenced this bibliography. As a result, five main parts exist: (1) a topical outline which defines over 300 topic headings established for this bibliography; (2) an index which associates the approximately 1400 bibliographic entries with the topic headings; (3) an alphabetic index of the common search items which would aid those using this bibliography, but who are unfamiliar with the topic headings; (4) an annotated bibliography of some 1400 citations, and (5) an index of the authors of these citations.

**163. Human tolerance to rapidly applied accelerations: A survey of the literature.**

A. Martin Eiband. Washington, D. C. National Aeronautics and Space Administration, June 1959. 93p. (AD-218 269)

Includes 283 references arranged by categories.

**INVENTIONS**

**164. Books and pamphlets relating to patents.** Houston, Tex., Science Information Associates, 1958. 7p.

A non-annotated listing of material dating from 1890 to 1958. Available from Science Information Associates.

**165. Economics of invention: A survey of the literature.**

Richard R. Nelson. Santa Monica, Calif., Rand Corp., Jan. 15, 1959. 54p. (Rept. RM 2146 1) (AD-209 021)

Includes 70 references.

**METALS**

**166. Bibliography on electroplating cobalt and cobalt alloys.**

F. R. Morral. Columbus, Ohio, Battelle Memorial Institute, Cobalt Information Center, 1958. 16p.

Encompasses literature on the electroplating of cobalt and its binary and ternary alloys from 1900 to June 1957.

**167. Bibliography on extractive metallurgy of nickel and cobalt, 1900-1928.**

Curtis A. Jones. Washington, D. C., U. S. Bureau of Mines, 1959. 33p. (Info. Circ. 7883)

Supplements material published in earlier Information Circular 7805, covering period 1929-July 1955, issued in 1957. Contains 348 references.

**168. Bibliography on the effects of hydrogen embrittlement of metals: 1952 to present.**

P. E. Bell. Los Alamos, N. Mex., Los Alamos Scientific Laboratory, June 3, 1959. 19p. (Rept. 2283)

A non-annotated listing by author of 107 references, mainly concerned with the action of hydrogen on steel and titanium. Period covered is 1952-1958. Available from OTS.

**169. Bibliography on titanium alloys.**

H. Stier and W. M. Sutherland. San Diego, Calif., Convair, Feb. 3, 1958,

rev., Nov. 1958. 19p. (Appendix 1 to Rept. 57-995-7, revision of Appendix 1 to Rept. 57-995-7)

236 references. Bound with Titanium Development, by A. P. Langlois, C. W. Alesch and others. v. p., San Diego, Calif., Convair, Dec. 1958. (Interim Eng. Rept. 4) (AD 210-704).

**170. Creep and relaxation in metals and ceramics — A bibliography, 1950 to March 1958.**

Glenn R. Maynard and Xavier D. Lane. Livermore, Calif., University of California, Lawrence Radiation Laboratory, Apr. 15, 1959. 33p.

A selected bibliography of books, journal articles and reports. Particular attention has been paid to studies or applications to the consideration of beryllium oxide and on studies of phenomenological materials behavior and high temperature studies.

**171. Critical review of the volumetric methods for the platinum metals.**

F. E. Beamish. ANALYT. CHEM. ACTA 20:101-112, Feb. 1959.

Survey based on 61 references of published methods of volumetric determination of Pd, Pt, Rh, Ir, Ru and Os.

**172. Tantalum: A bibliography of phase diagrams and properties of tantalum systems (1953 through 1957).**

Helen Stearns. Los Alamos, N. Mex., Atomic Energy Commission, 1958. 35p. (AECU-3863) (D-Bib-17)

A bibliography of phase diagrams and properties of tantalum systems is presented. The list is neither exhaustive nor critical. Available from OTS.

**173. Tantalum: A review of recent literature.**

H. Spindler. METALL 12:921-924, 1958. 12 references are included in this review of occurrence and extraction, separation of Ta and Nb, production of Ta powder and massive metal, working up of Ti scrap, and properties and fabrication. In German.

**SPACE SCIENCE**

**174. Bibliography of research and development of protective clothing for handling of rocket fuels.**

Washington, D. C., Department of Defense, Office of the Assistant Secretary of Defense, Research and Engineering. Dec. 1958. 15p.

About 100 references grouped according to the issuing agency.

**175. Bio-astronautics: An ASTIA report bibliography.**

Arlington, Va., Armed Services Technical Information Agency, Feb. 1959. 164p. (AD-211 775) (PB 151 853)

905 references relating to the biological problems of space flight for the period 1952 to 1958.

**176. Published bibliographies of aerospace medicine and related fields.**

In Bibliographic Control of Aviation and Space Medical Literature, by Arnold J. Jacobius, p. 512-516, Aerospace Medicine, v. 30, July 1959.

Included are aviation, and space medicine bibliographies; aeromedical periodicals containing current abstract coverage on aviation and space medicine; basic aeromedical textbooks which include extensive bibliographies; special aspects of aviation medicine; and current abstracting and indexing services covering related subject fields.

graphies; aeromedical periodicals containing current abstract coverage on aviation and space medicine; basic aeromedical textbooks which include extensive bibliographies; special aspects of aviation medicine; and current abstracting and indexing services covering related subject fields.

**177. A review of Soviet celestial-mechanics literature.**

No publisher, Sept. 30, 1958. 261p.

Noted in Technical Translations 2:171, Aug. 7, 1959. "A detailed survey up to 1957 is presented which is based on 375 papers, each of which is briefly reviewed . . . The bibliography contains 850 items. The text and the subject index to the bibliography are arranged under: two-body problems; capture in n-body problem; variable mass; figures of celestial bodies; cosmogony; and cosmogony of small bodies." Available from OTS.

**178. Review of the current status of satellite attitude control.**

Robert E. Roberson. J. ASTRONAUTICAL SCI. 6:25-30, Summer 1959.

34 references are included in this article in which literature pertaining to each of the major aspects of satellite attitude control is summarized and discussed. These include general descriptions, first principles and analytical formulations, control methods, sensors, actuators, synthesis, and mechanization, and performance analysis.

**TEMPERATURE**

**179. A compilation of the Debye or characteristic temperatures for elements and compounds. A bibliography.**

R. H. Lier. Los Alamos, N. Mex., California University, Los Alamos Scientific Laboratory, Aug. 19, 1959. 20p. (Rept. 2324)

Comprises 107 references with specific heat, heat capacity, elastic constants, thermodynamic properties and crystal structure. There are no annotations but indication of where an abstract may be found appears with many of the entries.

**180. High temperature measuring techniques. 1948 to present. A bibliography.**

R. H. Lier. Los Alamos, N. Mex., California University, Los Alamos Scientific Laboratory, Sept. 11, 1959. 43p. (Rept. 2325)

260 non-annotated journal references, mainly concerned with thermocouples, resistance bulbs, sonic pyrometers, infra-red and radiation pyrometers, and microwave techniques.

**COPY DEADLINE**

The next issue of SCI-TECH NEWS will be published on or about March 1. Copy for the spring issue should reach the editor not later than February 1. Section, Chapter and Division chairmen are encouraged to keep the editor informed of activities in their organizations so that they may properly be publicized.



## BIBLIOGRAPHY DIGEST CATEGORY INDEX

Bibliographies have been recorded in this section under the following categories in 1959. The numbers following the category are the bibliography entry numbers. For convenience in locating them entry numbers in the spring issue were 1-36, summer 37-78, fall 79-128, and winter 129-180.

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### WHAT'S THE ANSWER?

(Continued from Page 2)

\$570.00 for the service.

What is the answer if increased subscription costs isn't? We would like to suggest the more rigorous exercise of bibliographic birth control. The proliferation of scientific publications is not entirely justified on the basis of new information available to the scientific community. Although this suggestion is valid for consideration, we admit it lacks current practicality. We won't stop publishing, and we doubt that many are much more idealistic

than we are. (The mote is in our eye, too.)

There are other possibilities. ACS admits its members, for whom its publications are primarily intended, are not supporting its publication program as they should. This is, or should be, a matter of concern to the education program within ACS. It is conceivable that an abstract service might assess a charge against the publications whose articles are abstracted. Ten years ago it was proposed that authors of articles pay page costs for that which they published. The acceptance of advertising, even by prestige society publications, might mean the difference between continued publication and bibliographic death.

A Sci-Tech member now in the consultant and service business, Eugene Garfield, has suggested that the scientific publishers form an ASCAP type organization and levy charges on the reproduction of journal articles. How? Well, last week we saw a coin-operated photoduplication machine in a major university library.

There are causes for the financial dilemma of the American Chemical Society other than the efficiency of library service, and there are other solutions than increasing the subscription costs.

G. E. Randall

### ACS REPLIES

(Continued from Page 3)

not. This is understandable. The ACS has a staff which concerns itself exclusively with finding ways to support its publication program.

A society which publishes essential journals can go to industry for subsidization of services from which it benefits. The ACS does this by means of its Corporation Associate program. The continuing response has been rewarding and heartening but the ACS has no intention of abusing the generosity of industry.

The ACS also expects its membership to contribute to the support of its basic publications. Each member contributes \$2 annually for this purpose, whether or not he subscribes to any of the basic journals, and this has been the practice for more than 50 years.

Government support might be and has been sought. But government support is notorious for sudden withdrawal. What would happen to journals geared to operate in substantial part on government subsidy if funds suddenly were withdrawn! Private foundations can be approached but ACS financial needs are larger than most can undertake to support.

Finally, there are the products of research in communications. In this area the ACS places most hope for savings—which may

account for its leadership in publication research.

Thus it is seen that there are a number of approaches toward the financing of ACS journals aside from raising subscription costs. All help but all are inadequate. Ultimately, then, there seems to be no alternative to charging the buyer for the material he receives.

The ACS hopes the day never will come when its publications are priced out of the market. Every effort will be bent to avoid this. On the other hand, the Society has no choice, in its role as purveyors of scientific information, except to pass on to subscribers the costs of the material they want or need.

#### AUTHORS WANTED

The columns of SCI-TECH NEWS are not limited to the editor, his friends, Division or Section officers, and Committee personnel. Any Division member who has the urge to write on a subject pertinent to the Sci-Tech Librarian or Documentalist is encouraged to submit manuscripts for consideration.

Space limitations have imposed a maximum length of 1600 words (two printed pages) and our secretary, who has found it necessary to retype several hundred pages of copy in the past eighteen months, asks that you double-space your article. Limber up your typing fingers, get the mental cells working, and make your contribution in time for the next issue. (Copy deadline — February 1).

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